



**HUMAN GENOME SCIENCES  
LEGAL DEPARTMENT**

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**FAX COVER SHEET**

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**COMMENTS:**

Per your request, please find attached the "ribboned" and "front" pages of the issued patent for U.S. Appl. Serial No. 08/468,011.

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*Has received an application for a patent for a new and useful invention. The title and description of the invention are enclosed. The requirements of law have been complied with, and it has been determined that a patent on the invention shall be granted under the law.*

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*If this application was filed prior to June 8, 1995, the term of this patent is the longer of seventeen years from the date of grant of this patent or twenty years from the earliest effective U.S. filing date of the application, subject to any statutory extension.*

*If this application was filed on or after June 8, 1995, the term of this patent is twenty years from the U.S. filing date, subject to any statutory extension. If the application contains a specific reference to an earlier filed application or applications under 35 U.S.C. 120, 121 or 365(c), the term of the patent is twenty years from the date on which the earliest application was filed, subject to any statutory extension.*

*T. Todd Pichini*

Commissioner of Patents and Trademarks

*Melvinia Gary*  
Attest

United States Patent [19]  
Soppet et al.

[11] Patent Number: 6,030,804  
[45] Date of Patent: \*Feb. 29, 2000

[54] POLYNUCLEOTIDES ENCODING G-  
PROTEIN PARATHYROID HORMONE  
RECEPTOR HLTDG74 POLYPEPTIDES

[75] Inventors: Daniel R. Soppet, Centreville, Va.; Yi  
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[\*] Notice: This patent issued on a continued prosecution application filed under 37 CFR 1.53(d), and is subject to the twenty year patent term provisions of 35 U.S.C. 154(a)(2).

[21] Appl. No.: 08/468,011

[22] Filed: Jun. 6, 1995

[51] Int. Cl.<sup>7</sup> C12N 15/12; C07K 14/705

[52] U.S. Cl. 435/69.1; 435/252.3; 435/254.11;  
435/325; 435/520.1; 536/23.5; 536/24.31

[58] Field of Search 536/23.5, 24.31;  
435/69.1, 325, 252.3, 254.11, 320.1

[56] References Cited

PUBLICATIONS

Proc. Natl. Acad. Sci. USA, vol. 87, pp. 3052-3056, (Apr. 1990).  
Science, vol. 244, pp. 569-572, (May 5, 1989).

FEBS 08897, vol. 271, No. 1, 2, pp. 81-84, (Oct. 1990).

The Journal of Biological Chemistry, vol. 265, No. 16, pp. 9308-9313, (Jan. 25, 1990).

FEBS 09821, vol. 284, pp. 155-160, (Jun. 1991).

The Journal of Biological Chemistry, vol. 270, No. 26, pp. 15455-15458, (1995).

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[57] ABSTRACT

Human G-protein parathyroid hormone (PTH) receptor polypeptides and DNA (RNA) encoding such polypeptides and a procedure for producing such polypeptides by recombinant techniques is disclosed. Also disclosed are methods for utilizing such polypeptides for identifying antagonists and agonists to such polypeptides and methods of using the agonists and antagonists therapeutically to treat conditions related to the underexpression and overexpression of the PTH receptor polypeptides. Also disclosed are diagnostic methods for detecting a mutation in the PTH receptor nucleic acid sequences and detecting a level of the soluble form of the receptors in a sample derived from a host.

26 Claims, 10 Drawing Sheets